



The first fossil record of the genus *Chileutomia* (Eulimidae: Gastropoda) in the Mediterranean Neogene

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KEY WORDS: *Chileutomia*, Eulimidae, Pliocene, Zanclean, Mediterranean.

ABSTRACT A few shells attributable to *Chileutomia miranda* (Dautzenberg, 1925) (Eulimidae, Prosobranchia, Gastropoda) have been discovered in the early Pliocene (Zanclean) deposits at Velerín near Estepona, Southern Spain. This is the first fossil record of this genus in the Mediterranean Neogene.

RIASSUNTO Pochi nicchi attribuiti a *Chileutomia miranda* (Dautzenberg, 1925) (Eulimidae, Prosobranchia, Gastropoda) sono stati rinvenuti in depositi del primo Pliocene (Zancleano) a Velerín, vicino a Estepona (Spagna meridionale). Questo è il primo reperto fossile neogenico di questo genere nel Mare Mediterraneo.

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INTRODUCTION

Only in recent years have the highly fossiliferous Pliocene (Zanclean) deposits around Velerín, Estepona (Malaga, Spain) appeared in the literature (e. g. Vera-Pelaez *et al.*, 1995). These Pliocene deposits, consist of coarse sands (representing out near shore and/or beach deposits), fine clayey sands (deposited in a relatively deeper shelf environment) and coarse conglomerates, all within a half kilometre radius. The conglomerates host the most diversified macrofossil assemblages; however the most interesting small gastropods are found in fine sandy clay especially at the locality of Velerín Carretera. Here the preservation of calcareous fossils is exquisite and even fragile species rarely found as fossil (such as *Aglaja depicta* Renier, 1807) occur in such sediments. The present paper documents the first record of shells belonging to *Chileutomia miranda* (Dautzenberg, 1925) in the Mediterranean Neogene. Our record is based upon two shells sourced from Velerín Carretera and two more found within coarse sand deposits outcropping nearby at Velerín Antena.

More recently LOZOUET (1999) considered *Auriculigerina* a synonym of *Chileutomia*, and we fully agree with this opinion, since all these genera display a strong anal notch, absent in *Oceanida*. Furthermore, the presence of the umbilicus depends on the greater or lesser development of the columellar lip and cannot be used as a character to differentiate between the genera.

SYSTEMATIC PALAEOONTOLOGY

Family	Eulimidae	Rafinesque, 1815
Genus	<i>Chileutomia</i>	Tate & Cossmann <i>in</i> Tate, 1898
Synonyms	<i>Hoplopteroopsis</i>	de Morgan, 1915;
	<i>Auriculigerina</i>	Dautzenberg, 1925

Discussion of genus: The genus *Hoplopteroopsis*, Mogan, 1915 was synonymised with *Chileutomia* Tate & Cossmann *in* Tate, 1898 by COSSMANN (1921). WARÉN (1984, 1986) discussed the close relationship between *Auriculigerina* Dautzenberg, 1925, *Oceanida* de Folin, 1870 and *Chileutomia* Tate & Cossmann *in* Tate, 1898. According to this author *Chileutomia* is restricted to the Tertiary of Australia and differs from the previous two in having a deep umbilicus. *Auriculigerina* is characterised by a greater development of thickened scars from earlier positions of the outer lip present in all these genera, into wing-like varices. Indeed he suggested *Auriculigerina miranda* could be an aberrant species of the genus *Oceanida*.

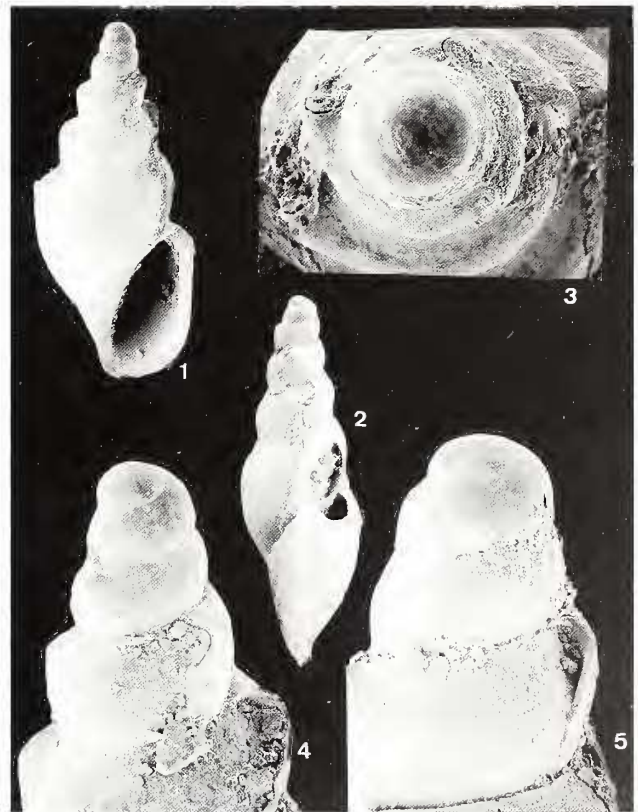


PLATE 1: *Chileutomia miranda* (Dautzenberg, 1925)
Lower Pliocene, Zanclean; Velerín conglomerates, Velerín Estepona, Spain.
Fig. 1: Frontal view; x 15.2. Fig. 2: Side view; x 15.2. Fig. 3: Protoconch apical view; x 45.8. Fig. 4: Protoconch; x 45.4. Fig. 5: Protoconch detail; x 56.8.



1925 - *Auriculigerina miranda* Dautzenberg, 1925: 7, fig. 5-6.

1926 - *Auriculigerina miranda* Dautzenberg: Dautzenberg, 1927. 170, pl. 5, fig 14-17

1927 - *Auriculigerina miranda* Dautzenberg: Warén 31, fig. 46-47.

1928 - *Auriculigerina miranda* Dautzenberg: Bouchet & Warén, 440, fig. 1042-1047.

MATERIAL STUDIED

Two specimens from the Velerín sands, two from Velerín Carretera, Estepona, Spain. All Zanclian, Lower Pliocene (no formation name).

Dimensions: figured specimen: 6.9x3.9 mm, others: 7.1x2.7 mm, 5.0x2.2 mm, 3.4x3.4 mm.

Description: Shell small, thin, turriculate, antero-posteriorly flattened, seven to eight whorls, height of the largest specimen 6.9mm, width 3.9 mm (height/width ratio 1.76). Protoconch paucispiral, about one and one half whorls, smooth, first whorl bulbous, junction with teleoconch not clearly delineated. Teleoconch about six whorls, devoid of sculpture except for very faint, closely set growth lines. Whorl profile is almost straight with a well-developed sutural ramp, giving the shell profile a stepped appearance. Two strong varices are present on the periphery of each whorl, placed almost in a linear fashion above each other, developing from the scar of the outer apertural lip. These varices are detached from the whorl and most developed adapically, where they join the suture forming a sinus. The whorl profile is therefore broadest adapically, tapering slightly towards the lower suture. Aperture elongated, oval, with the outer lip slightly flared abapically. Outer lip thickened; well-developed anal sinus; narrow, clearly delimited parietal callus. In some specimens a small umbilical cleft is formed between the columella and the last varix on the body whorl. The thickness of the outer lip and strength of the umbilical cleft varies between specimens.

REMARKS

Auriculigerina miranda is a rare taxon. Originally described from deep water off the Azores and, more recently, recorded also from shallower depths offshore Sicily (BOUCHET & WARÉN, 1986, p. 440). Three European Tertiary species have been described, all from French Atlantic deposits under the various generic names mentioned above. The oldest is *Chilentomia paulinensis* Lozouet, 1999, recorded from the Late Oligocene, *Hoplopteroopsis pontileviensis* de Morgan, 1915, from the Pontilevien, Middle Miocene and the Late Miocene (Redonian) *Chilentomia morgani* Cossmann in de Morgan, 1915. *Chilentomia paulinensis* Lozouet, 1999, differs from *C. miranda* by having a multispiral protoconch with about one extra whorl; the teleoconchs of both species are remarkably similar and characterised by strongly developed varices. *Chilentomia pontileviensis* (de Morgan, 1915) has a paucispiral, bulbous protoconch (like *C. miranda*), but differs by having a more elongated, less stepped teleoconch and differs from both *C. paulinensis* and *C. miranda* by having lesser developed varices. Judging from the original figure *Chilentomia morgani* Cossmann in de Morgan, 1915 has even weaker varices than *C. pontileviensis* and a larger and more oval aperture than any of the previous species. According to WARÉN (1984, p. 49) "The figure of that

species shows distinctly carinated apical whorls, as in *Menon*', placed by him in the Rissocera. Neither the figure nor the description given by de MORGAN (1915, p. 340, fig. 36) suggest carinated whorls and due to the lack of further material, we prefer to keep the original generic designation.

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